**NOTICE OF TITLE V AIR QUALITY PERMIT**
**APPLICATION AND DRAFT PERMIT**

The South Dakota Department of Environment and Natural Resources (DENR) has received and reviewed the application for a Title V air quality permit for the following applicant:

APPLICANT NAME: Prairie Ethanol, LLC d.b.a. POET Biorefining - Mitchell

FACILITY LOCATION: Mitchell, South Dakota

The Title V air quality permit will allow the operation of the following processes and units:

List of Permitted Equipment

#1 Grain receiving, grain transfer via enclosed conveyor belt systems, and storage bin loading. Elevator legs transport the grain from the receiving pit to five grain storage bins. Operates at 840 tons of grain per hour. Emissions are controlled by a baghouse. Elevator legs transport dried distillers grain and solubles from a storage silo to load out stations. The dried distillers grain and solubles is loaded into trucks and railcars. Operates at 220 tons of dried distillers grain and solubles per hour.

#2 Grain cleaning and grain transfer. The grain will be transferred from the grain storage bins to a grain scalper 140 tons of grain per hour. Emissions are controlled by a baghouse.

#3 Grain milling. The cleaned grain is transferred to a hammer mill – operates at 22 tons of grain per hour. Emissions are controlled by a baghouse.

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#6 Grain milling. The cleaned grain is transferred to a hammer mill – operates at 22 tons of grain per hour. Emissions are controlled by a baghouse.

#7 Fermentation system. Ethanol is produced from the fermentation process. The fermentation process occurs in five fermenters and the liquid beer is stored in a beer well – operates at 207 tons of mash per hour. Emissions are controlled by a wet scrubber. The exhaust gases from the wet scrubber are passed through the regenerative thermal oxidizer (Unit #8) but may bypass the regenerative thermal oxidizer under the terms of this permit. Distillation process. The distillation process consists of the beer stripper, rectifier, side stripper, molecular sieve, and evaporators and operates at 48,600 gallons of beer per hour.

#8 The distillers grain and solubles are dried in two ring dryers operated in series or in parallel. Each dryer has a multi-cyclone to collect product and is fired on natural gas operates at 23 tons of dried distillers grains and solubles per hour and each dryer has a heat input capacity of 60 million Btus per hour. Emissions are controlled by a regenerative thermal oxidizer. The thermal oxidizer has a maximum operating rate of 30 million Btus per hour heat input. The thin stillage and solids fractions of the wet distillers grain and solubles are separated by four centrifuges. Each centrifuge processes 50 tons of whole stillage per hour.

#9 A fluid bed cooler. The fluid bed cools the dried distillers grain and solubles and operates at 23 tons of dried distillers grain and solubles per hour. Emissions are controlled by a baghouse. A portion of the exhaust gases may be passed through the dried distillers grain and solubles dryer(s) in Unit #8

#10 Dried distillers grain and solubles silo. Operates at 23 tons of dried distillers grain and solubles per hour. Emissions are controlled by a baghouse.

#11 Dried distillers grain and solubles silo bypass. Operates at 23 tons of dried distillers grain and solubles per hour. Emissions are controlled by a baghouse.

#12 Boiler #1. A natural gas fired steam boiler fired equipped with low NOx burners. The boiler operates at 143 million Btus per hour heat input

#13 Boiler #2. A natural gas fired steam boiler fired equipped with low NOx burners. The boiler operates at 143 million Btus per hour heat input

#14 Generator. An emergency generator fired on distillate oil and operates at 2,000 kilowatts.

#15 An industrial cooling tower with three cells

#16 A submerged truck loading rack and a railcar loading rack. The truck loading rack operates at 39,000 gallons of denatured ethanol per hour. The rail car loading rack operates at 150,000 gallons of denatured ethanol per hour. Emissions are controlled by a flare operating at a rate of 6.4 million Btus per hour heat input.

#18 Tank #1 – A 250,000 gallon aboveground storage tank with an internal floating roof. The tank will store ethanol.

#19 Tank #2 – A 250,000 gallon aboveground storage tank with an internal floating roof. The tank will store ethanol.

#20 Tank #3 – A 1,500,000 gallon aboveground storage tank with an internal floating roof. The tank will store denatured ethanol.

#21 Tank #4 – A 1,500,000 gallon aboveground storage tank with an internal floating roof. The tank will store denatured ethanol.

#22 Tank #5 – A 126,000 gallon aboveground storage tank with an internal floating roof. The tank will store gasoline.

#23 Grain milling. The cleaned grain is transferred to a hammer mill – operates at 22 tons of grain per hour. Emissions are controlled by a baghouse

A review of this facility indicates it can operate in compliance with South Dakota's Air Pollution Control rules and the federal Clean Air Act. DENR, therefore, recommends that the Board of Minerals and Environment issue this operating permit with conditions to ensure compliance with SDCL 34A-1 and the federal Clean Air Act.

In accordance with the Administrative Rules of South Dakota (ARSD) 74:36:05:17, any person desiring to comment on DENR's draft permit must submit written comments to the address below within thirty days of this public notice. Comments may be directed to the following mailing address: PMB 2020, Lita Magedanz, Department of Environment and Natural Resources; Division of Environmental Services; 523 East Capitol, Pierre, South Dakota 57501. DENR will consider and address all comments submitted, and issue a final permit decision pursuant to ARSD 74:36:05:18. DENR will notify the applicant and each person that submitted written comments or requested notice of DENR's final permit decision, including notification of any changes to the permit based on the comments.

Any person desiring to contest the issuance of this permit and have a contested case hearing must file a petition, which complies with ARSD 74:09:01:01. This petition must be filed either within thirty days of this public notice or, if that person submits comments on DENR's draft permit pursuant to the paragraph above, within thirty days of receiving notice of DENR's final permit decision. Upon receipt of a petition, DENR will schedule this matter for a contested case hearing before the Board of Minerals and Environment.

If no comments or objections are received within thirty days of this public notice, the draft permit becomes the final permit decision and the proposed permit will be submitted to EPA for review.

Copies of DENR's draft permit and other information may be obtained from Keith Gestring, Natural Resources Engineer, at the above address or telephone (605) 677-6165.

Steven M Pirner, Secretary
Department of Environment and Natural Resources

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